



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,637	08/22/2003	Takao Tsuruoka	IPO-P1755	9783
3624	7590	06/09/2008	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			MISLEH, JUSTIN P	
			ART UNIT	PAPER NUMBER
			2622	
			MAIL DATE	DELIVERY MODE
			06/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/646,637	Applicant(s) TSURUOKA, TAKAO	
	Examiner JUSTIN P. MISLEH	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 January 2008.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 27 is/are pending in the application.
- 4a) Of the above claim(s) 8 - 10, 14, 20 - 22, and 26 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 - 4, 7, 15 - 17, and 27 is/are rejected.
- 7) Claim(s) 6, 11 - 13, 18, and 23 - 25 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 August 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
- 1. Certified copies of the priority documents have been received.
- 2. Certified copies of the priority documents have been received in Application No. _____.
- 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Note: The Examiner for the present application has changed.

Response to Arguments

1. Applicant's arguments, see Amendment, filed January 31, 2008, with respect to Claims 1, 2, 5 – 6, 17, 18 and 27 have been fully considered and are persuasive. The rejection of Claims 1, 2, 5-6, 17, 18 and 27 under 35 U.S.C. §103 has been withdrawn.

2. In the Amendment, Applicant has amended Claim 27 in a manner proposed by the Examiner; although, Claims 1 – 7, 11 – 13, 15 – 19 and 23 – 25 have been amended to change “means plus function” terms to structure.

3. The Examiner respectfully notes Applicant's persuasive arguments necessitate the new grounds of rejection. Accordingly, this action is made **NON-FINAL**. Finally, the Examiner additionally notes **Claims 1 – 7, 11 – 13, 15 – 19, 23 – 25, and 27** remain under consideration, while **Claims 8 – 10, 14, 20 – 22, and 26** remain withdrawn from consideration.

Specification

4. In the preliminary amendment filed August 22, 2004, Applicant indicated a substitute specification accompanies the amendment. However, no substitute specification appears to have been filed for the application. The Examiner respectfully requests clarification on this matter.

5. Should Applicant file a substitute specification, Applicant is reminded that the substitute specification must not contain new matter. Furthermore, the substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the

Art Unit: 2622

specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. Finally, an accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Objections

6. **Claims 4 and 16** are objected to because of the following informalities: include non-elected subject matter.

Claims 4 and 16 both require, “wherein the shooting condition estimator comprises at least one of an overall estimating means estimator ... and a regional estimating means.”

Elected figure 3 shows where the shooting conditions estimating unit includes an overall estimating unit (34). Non-elected figures 11A and 11B shows where the shooting conditions estimating unit includes a region estimating unit (73). None of the figures shows where the shooting conditions unit includes both an overall estimating unit and a region estimating unit. Claims 4 and 16 should be amended to include subject matter exclusively from elected Figure 3 or another elected figure, canceled, or withdrawn from consideration.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1 – 4, 15, 16, and 27** are rejected under 35 U.S.C. 102(b) as being anticipated by Mancuso et al. (US 6,256,414 B1).

6. For **Claims 1 and 27**, Mancuso et al. disclose, as shown in figures 1 and 2, an image pickup system comprising:

a noise estimator (245) for estimating an amount of noise contained in a digitized signal from an image pickup element (120) composed of an array of a plurality of pixels, either for each pixel or for each specified unit area comprising a plurality of pixels (see column 2, lines 26 – 58; and column 4, lines 32 – 53);

a shooting condition estimator (230; 235; and 240) for estimating a shooting condition when an image based on said signal is acquired (see column 4, lines 11 – 31);

a correction unit (250) for correcting the amount of noise estimated by the noise estimator (245) based on the shooting condition estimated by the shooting condition estimator (230; 235; and 240; see column 4, lines 32 – 53); and

noise reducing unit (255) for reducing the noise in the signal based on the amount of noise corrected by the correction unit (see column 4, lines 54 – 58).

7. As for **Claim 2**, Mancuso et al. disclose, as shown in figures 1 and 2, color filters arranged on a front surface of the image pickup element (120; see column 2, lines 26 – 58); and

Art Unit: 2622

a separating unit (205) for separating the signal that is output from the image pickup element into signals for each color filter (see column 3, lines 42 – 50).

8. As for **Claims 3 and 15**, Mancuso et al. disclose, as shown in figures 1 and 2, wherein the noise estimator (245) comprises:

parameter calculator (245) for calculating parameters based on at least one type of information selected from among a signal value level of the signal (“estimate of the noise dependent on the luminosity of the digital image”; see column 4, lines 33 – 34), *a temperature of the image pickup element, a gain for the signal, and a shutter speed during shooting* (not required due to the alternative nature of the claim language); and

a noise amount calculator (245) for calculating the amount of noise based on the parameters calculated by the parameter calculating means calculator (“estimate of the noise dependent on the luminosity of the digital image”; “The digital image is modified on the basis of the estimation performed by the unit 245 so as to reduce dynamically the effects of the noise introduced by the light sensor, dependent on the noise level and on the spatial characteristics of the image”; see column 4, lines 33 – 44).

9. As for **Claims 4, 5, 16, and 17**, Mancuso et al. disclose, as shown in figures 1 and 2, wherein the shooting condition estimator (230; 235; and 240) comprises an overall estimator (230) for estimating the shooting condition for an overall signal when an image based on the signal is acquired (see column 4, lines 12 – 21), based on at least one type of information selected from among *focus information, exposure information (235), zoom position information, eye sensing information and strobe light emission information* (not required due to the alternative nature of the claim language).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 7 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mancuso et al. (US 6,256,414 B1).

12. As for **Claims 7 and 19**, Mancuso et al. disclose, as shown in figures 1 and 2, wherein the shooting condition estimator (230; 235; and 240) comprises an overall estimating means (230 and 235) estimator for estimating and judging, based on exposure information, whether or not the shooting condition relating to an overall signal when an image based on the signal is acquired is of *back-lighting or excessive front lighting* (see column 4, lines 13 – 21).

Mancuso et al. do not disclose whether or not the shooting condition is of night view shooting.

However, the Examiner respectfully takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of determining whether the shooting condition is of night view shooting are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have also included whether the shooting condition is of night view shooting in Mancuso et al. for the advantage of *even further enhancing image quality*.

Allowable Subject Matter

Claims 6, 11 – 13, 18, and 23 – 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Cited Prior Art

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure for the following reasons:

- **US 7,054,501 B1 and US 2003/0179944 A1** each disclose an apparatus and method for estimating noise in digital images.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lin Ye can be reached on 571.272.7372. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2622

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/
Examiner, Art Unit 2622
June 9, 2008**